Residential Natural Gas Decarbonization

Background & Methodology

Xcel Energy Branded Online Survey On Residential Natural Gas Decarbonization Pathways
Survey Fielding: March 30, 2020 through April 13, 2020
Total Invitations Sent Via E-Mail: 19,945
Target Audience: Residential Natural Gas Customers in Minnesota and Colorado
Total Survey Completes: 466
Response Rate: 2.34% (466 completed / 19,945 sent)
Incentive Used: None

Key Takeaways

Opportunity Remains To Further Educate XE Customers On Residential Natural Gas Decarbonization Options

- While residential natural gas customers appear strongly familiar with the concepts of carbon footprints and greenhouse gases, the majority reported unfamiliarity with the three natural gas decarbonization pathways of renewable natural gas, carbon offsets and appliance electrification.

Reducing Their Household's Carbon Footprint Is Mostly/Extremely Important to More Than 2 in 3 Customers

- Driving and air travel, coupled with packaging waste, are the leading factors reported by customers to be contributing to their household's carbon footprint. However, only about 1 in 10 customers reported that natural gas use in their home plays a role in their personal carbon footprint.

Renewable Natural Gas Is The Most Preferred Option When It Comes to Residential Customers Reducing Their Household's Natural Gas Carbon Footprint

- The large majority of customers indicated a willingness to pay for RNG of under $50 per month on top of their existing natural gas bill. With carbon offsets, the price threshold was lower, as the majority of customers are only willing to pay $30 or less per month towards carbon offsets used to reduce their household's carbon footprint.
- Among the natural gas decarbonization options, appliance electrification saw the highest percentage of customers indicate that they would not want to pay any additional amount for such an option.

Opportunity Remains To Further Educate XE Customers On Residential Natural Gas Decarbonization Options

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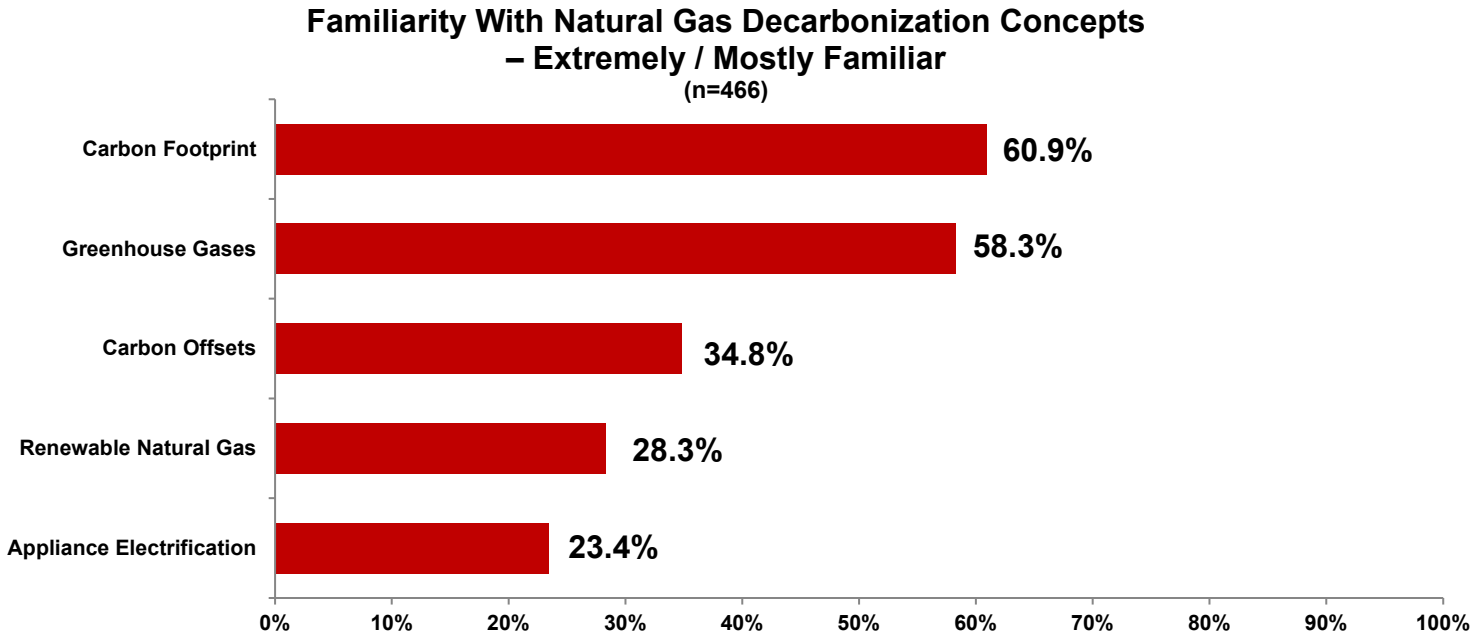
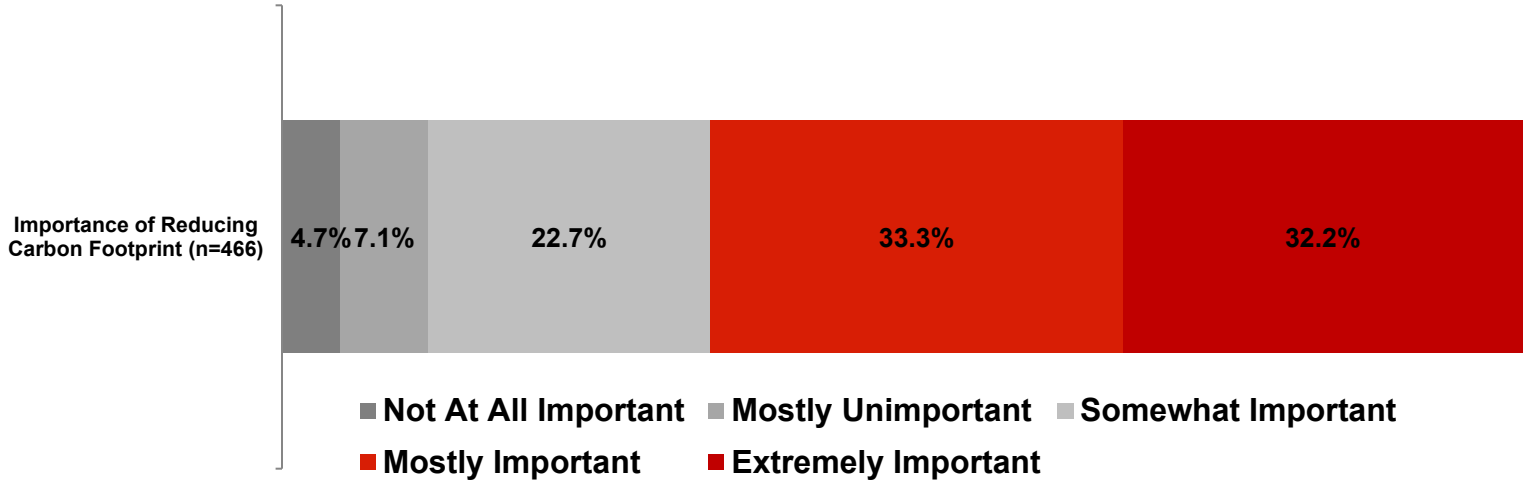


Q1: To start, using a scale of 1 to 5, with 5 being "Extremely Familiar" and 1 being "Not at all Familiar," how would you rate your familiarity with each of the following?

Reducing Their Household's Carbon Footprint Is Mostly/Extremely Important to More Than 2 in 3 Customers

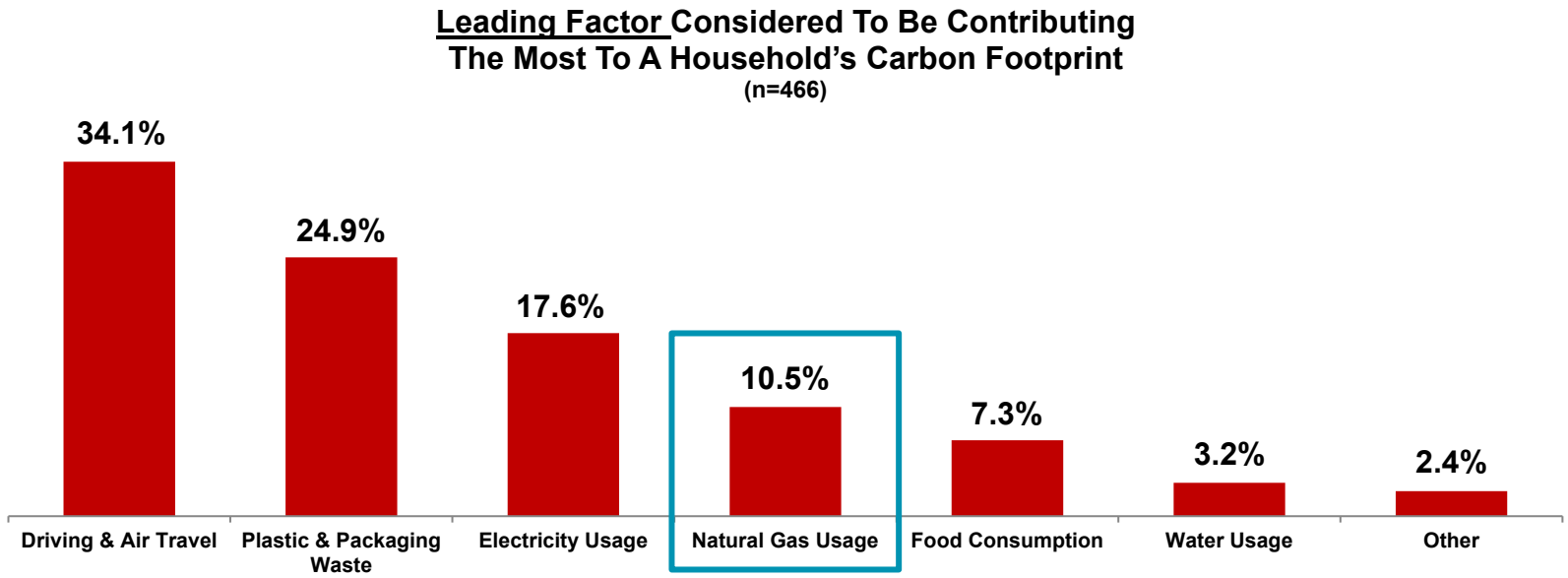
Less than 5% of customers indicated that reducing their household's carbon footprint was not at all important to them at this point in time.



Q2: Now please indicate on a scale of 1 to 5, with 5 being "Extremely Important" and 1 being "Not at all Important" how important is it for you to reduce you or your household's carbon footprint?

Customers Are Of The Opinion That Driving And Air Travel, Coupled With Packaging Waste, Are Leading Factors Contributing To Their Household's Carbon Footprint

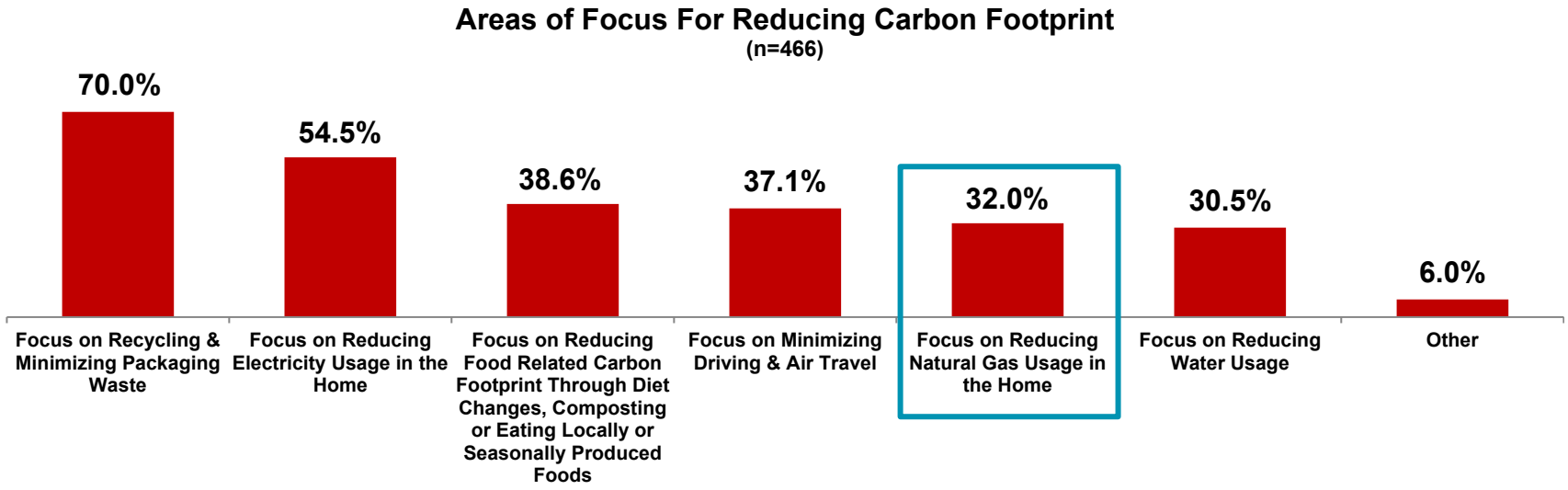
Only about 1 in 10 customers reported that natural gas use in their home plays a role in their personal carbon footprint.



Q3: In your opinion, which contributes the most to you or your household's carbon footprint? Place a "1" next to the area that you think contributes the most, followed by a "2" for the 2nd biggest contributor, "3" for the 3rd biggest, etc. If you are not sure, your best estimate is fine.

Customer Appear Focused On Recycling and Reducing Home Electricity Use As Key Approaches For Reducing Their Home Carbon Footprint

Only about 1 in 3 customers indicated that they are focusing on reducing natural gas usage at home as a way to shrink or eliminate their carbon footprint.

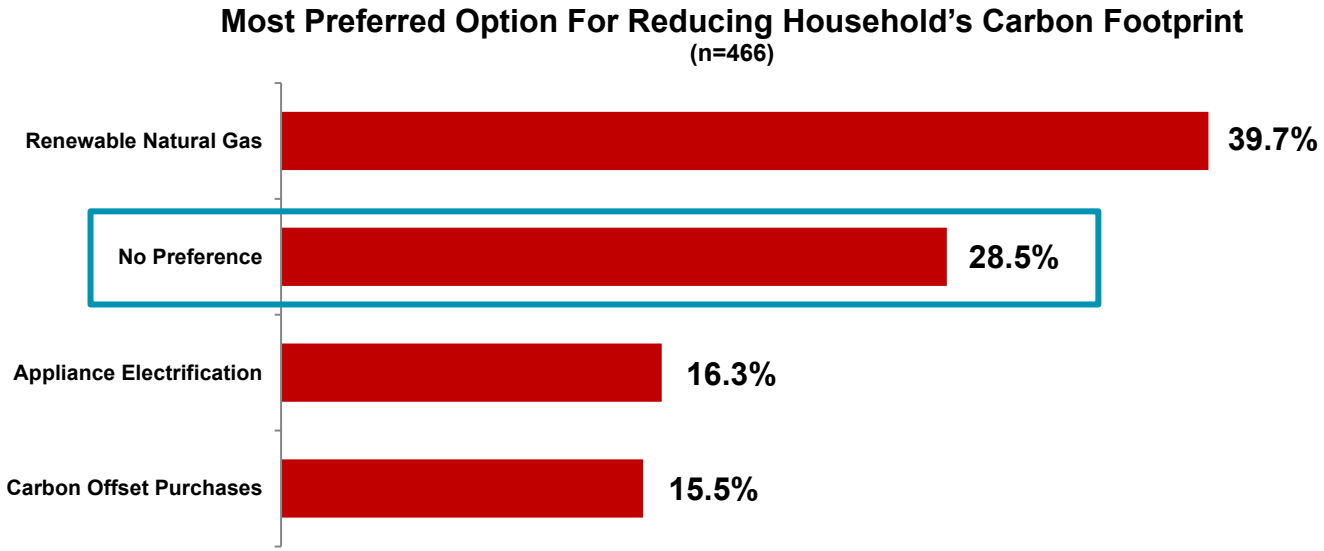


N.B. – Multiple responses allowed

Q4: Now please indicate those areas which you would have a high likelihood to focus on within the next year in terms of reducing you or your household's carbon footprint. Please select all that apply:

Renewable Natural Gas Is The Most Preferred Option When It Comes to Residential Customers Reducing Their Household's Natural Gas Carbon Footprint

While RNG came out as the preferred option, it was noteworthy to also see that nearly 30% of customers expressed no preference among the natural gas decarbonization options presented, possibly pointing to a need for greater customer education on these concepts.

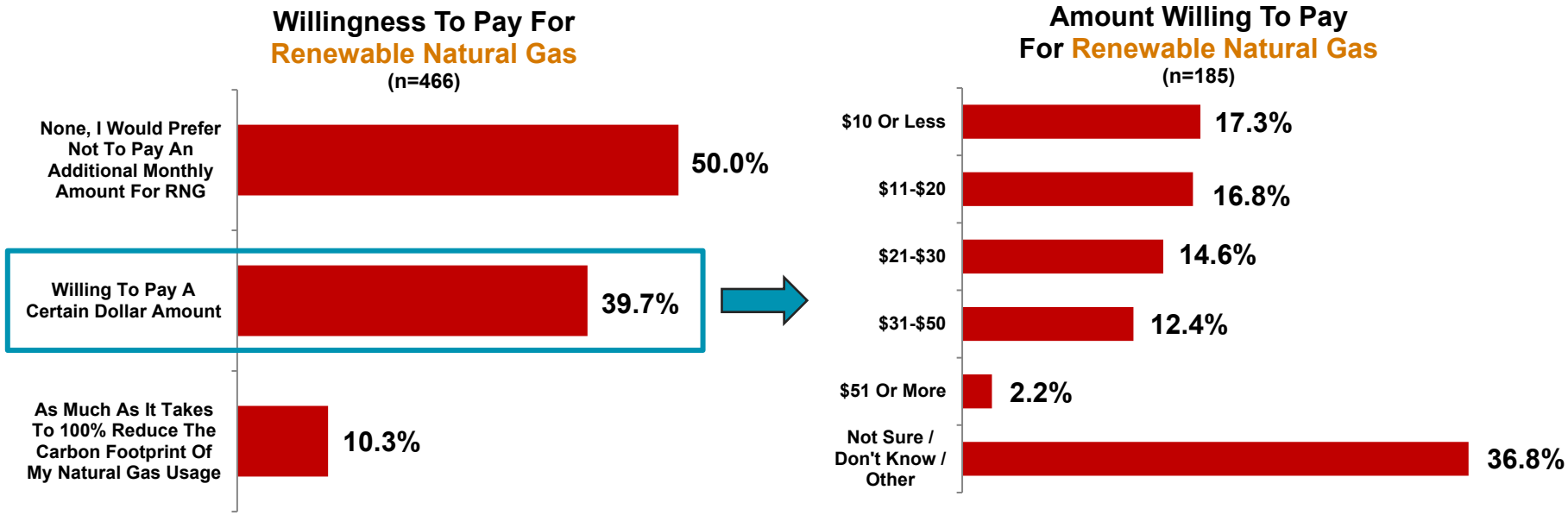


Q5: All three methods (renewable natural gas, carbon offsets and appliance electrification), are ways you can reduce your natural gas carbon footprint. Please indicate your most preferred option for lowering you or your household's carbon footprint.

Half of Customers Are Not Willing To Pay Additionally For RNG As A Means To Reduce Their Household's Carbon Footprint

Despite the challenge of 1 in 2 customers stating that they do not prefer to pay anything additionally per month for RNG, nearly 40% were open to pay some additional amount.

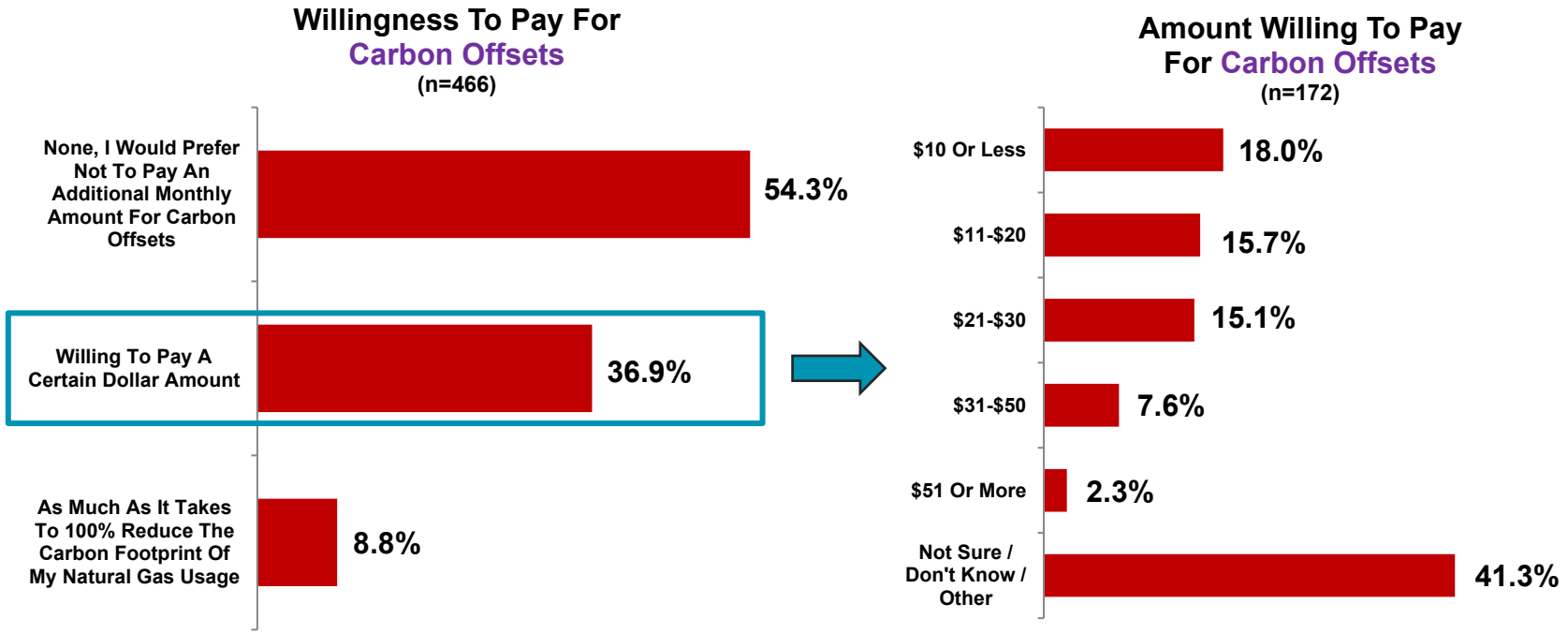
One area of focus appears to be customer education on RNG pricing, as more than 1 in 3 were unsure of what they would actually be willing to spend for the option of RNG.



Q6: Considering what you read through about personal and household carbon footprints and ways in which you can reduce the carbon footprint associated with your natural gas usage, what would be the highest additional dollar amount you would be willing to pay each month, above a $100 typical household monthly bill amount, for renewable natural gas?

More Than A Third of Customers Appear Open To Purchasing Carbon Offsets

The majority of customers are only willing to pay $30 or less per month towards carbon offsets used to reduce their household's carbon footprint. A notable portion of customers also appear to be unsure of what they would spend on carbon offsets.

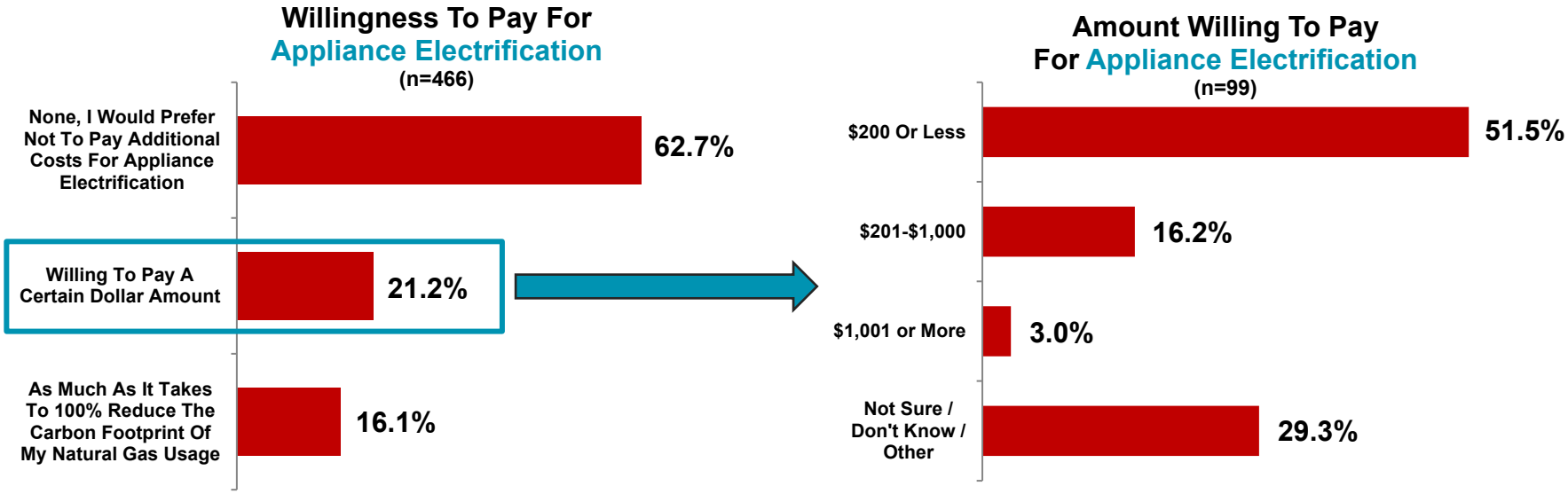


Q7: And what would be the highest additional dollar amount you would be willing to pay each month, above a $100 typical household monthly bill amount, for carbon offsets?

A Strong Majority Of Customers Do Not Want To Pay For Appliance Electrification

Among the natural gas decarbonization options, appliance electrification saw the highest percentage of customers indicate that they would not want to pay any additional amount for such an option.

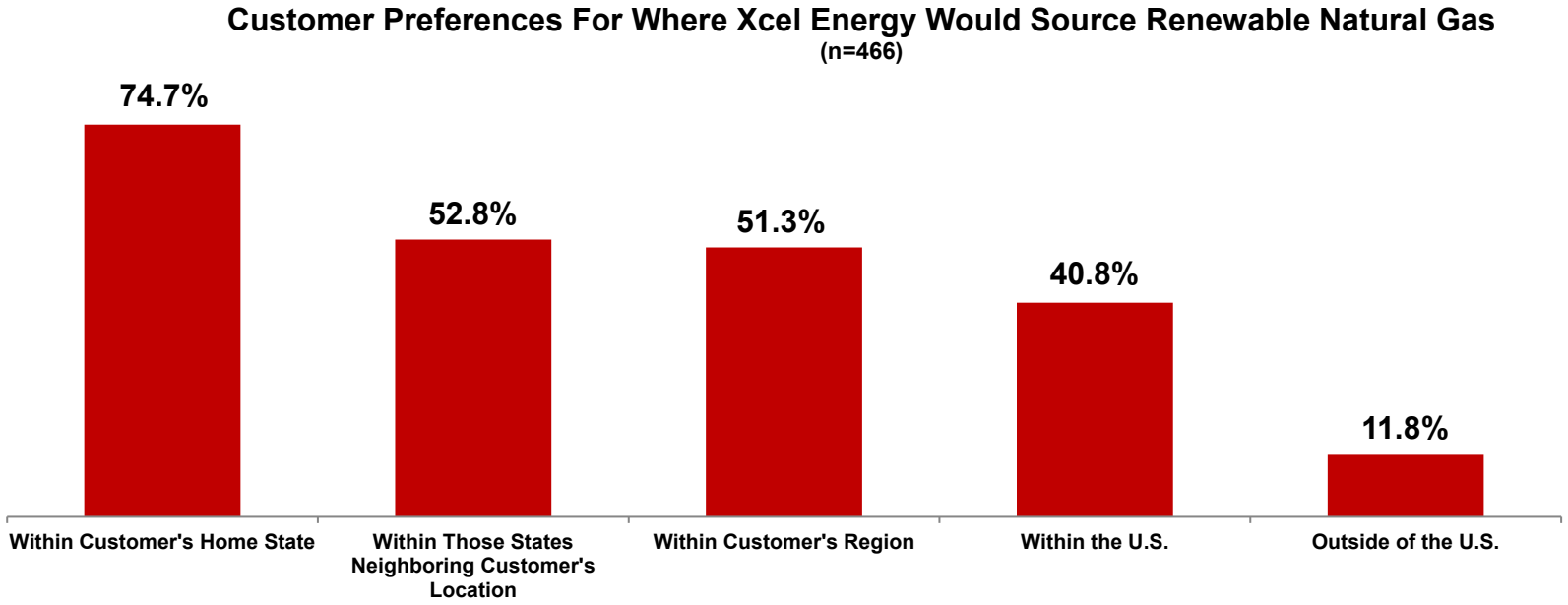
However, nearly 1 in 6 customers commented that they would be willing to pay as much as it takes via the appliance electrification approach to reduce 100% of their carbon footprint from natural gas usage, perhaps signaling a lack of understanding on the potential costs such a move would entail.



Q8: Given that the costs associated with appliance electrification are not incurred on a recurring monthly basis, but rather in the process of replacing natural gas consuming appliances with their electric-powered equivalent and then powering them with electricity that has a lower carbon impact, what would be the highest dollar amount you would be willing to pay in total for appliance electrification in your household?

Customers Strongly Prefer The RNG Supplied To Them To Be Sourced From Within Their Home State

Few customers indicated that it would be acceptable for Xcel Energy to source its RNG from outside the United States.



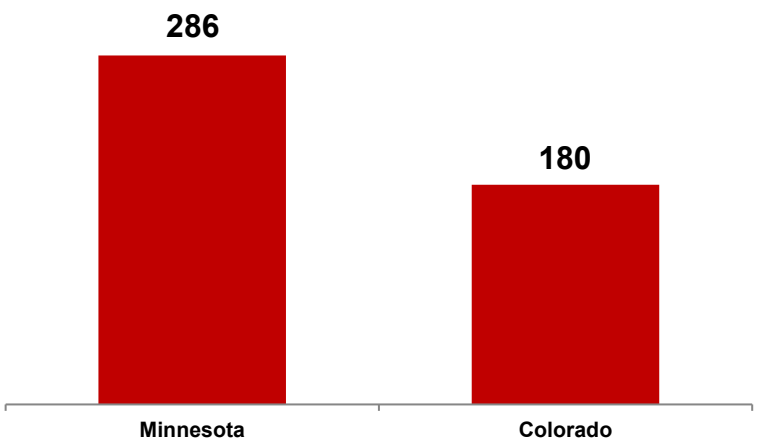
N.B. – **Multiple responses allowed**

Q9: Renewable natural gas can be produced from a number of different sources and at many diverse locations. The price of RNG is heavily dependent on how readily available RNG sources are in a given area and how far the captured natural gas needs to be transported to be added to a utility's pipeline. Please select all locations Xcel could source RNG for its customer that would be acceptable to you.

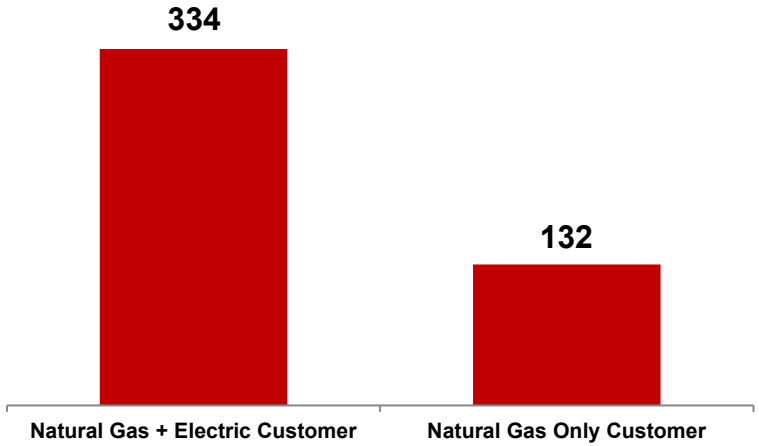
Appendix

Appendix – Demographic Data

Respondent Location - State
(n=466)



Respondent Service Type – Natural Gas / Electric
(n=466)



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